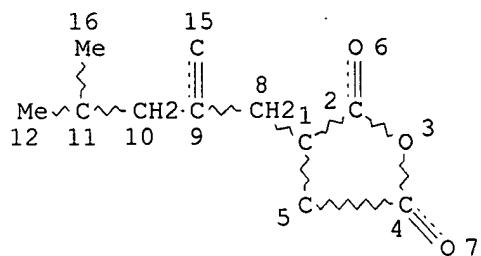


=> d que

L1 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

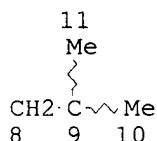
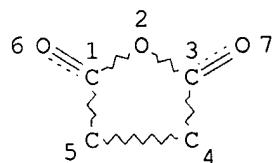
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L3 7 SEA FILE=REGISTRY SSS FUL L1

L9 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 1

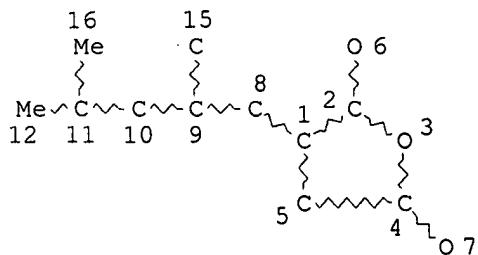
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L11 220 SEA FILE=REGISTRY SSS FUL L9

L12 12 SEA FILE=REGISTRY ABB=ON PLU=ON L11 AND PMS/CI

L13 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L14 7 SEA FILE=REGISTRY SUB=L12 SSS FUL L13

L15 3 SEA FILE=REGISTRY ABB=ON PLU=ON L14 NOT L3

L16 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L15

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L16 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:511184 HCAPLUS

DOCUMENT NUMBER: 133:231613

TITLE: Ultra-high-density magnetic information storage technologies

AUTHOR(S): Ohashi, Keishi; Ishiwata, Nobuyuki; Yanagisawa, Masahiro; Sato, Akinobu; Tsuboi, Shinzo; Hokkyo, Hirotaka

CORPORATE SOURCE: Functional Devices Research Laboratories, Japan

SOURCE: NEC Research & Development (2000), 41(2), 160-165
CODEN: NECRAU; ISSN: 0547-051X

PUBLISHER: NEC Creative, Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB: Three approaches used to achieve ultra-high-d. recording of 100 Gbit/in² are discussed. In order to overcome the thermal fluctuation problem of recorded patterns, a write head with Co-Ni-Fe poles has been developed. The Co-Ni-Fe pole generates the strongest write field. The head wrote well in media with a coercivity of 7 kOe, which is sufficiently large for ultra-high-d. recording. A narrow gap Co-Ni-Fe head for perpendicular recording has also been developed. The exptl. results on contact recording and a double-layer perpendicular medium are also discussed.

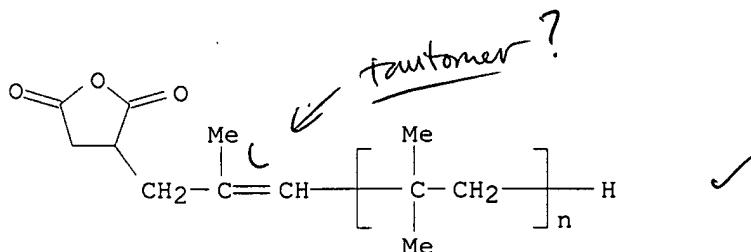
IT 197852-64-5

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(maleic-anhydride-modified; in ultra-high-d. magnetic information storage technologies)

RN 197852-64-5 HCAPLUS

CN Poly(1,1-dimethyl-1,2-ethanediyl), .alpha.-[2-methyl-3-(tetrahydro-2,5-

dioxo-3-furanyl)-1-propenyl]-.omega.-hydro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 2 OF 5 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:377315 HCPLUS
Correction of: 1997:649525

DOCUMENT NUMBER: 132:355919
Correction of: 127:340872

TITLE: Head-disk interface design for in-contact recording using wet systems

AUTHOR(S): Sato, Akinobu; Ajiki, Ken; Yanagisawa, Masahiro;
Tsukamoto, Yuji

CORPORATE SOURCE: NEC Corp., Kawasaki, 216, Japan

SOURCE: IEEE Transactions on Magnetics (1997), 33(5, Pt. 1),
3163-3165

CODEN: IEMGAQ; ISSN: 0018-9464

PUBLISHER: Institute of Electrical and Electronics Engineers

DOCUMENT TYPE: Journal

LANGUAGE: English

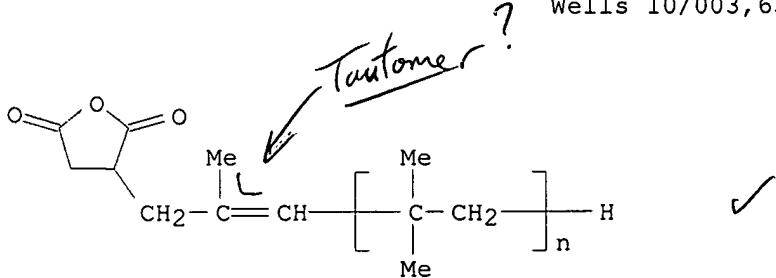
AB The authors have studied head-disk interface design concept of the wet systems is to realize a low bouncing height of sliders by using the meniscus attractive force of the lubricant between slider and disk. The lubricant offered high wear performance at the same time. Lubricants with high surface energies suppressed the bouncing height of contact sliders. A bouncing height of 3 nm was achieved for a combination of 30% contact sliders and lubricants of maleic anhydride modified polybutene. A contact slider design, with a meniscus-controlled contact pad, is proposed for contact sliders using wet systems. The bouncing of the slider was suppressed by regulating the etching depth of the meniscus-controlled contact pad. High wear performance of the in-contact recording system was confirmed by both the drag test for disks and the seek test for heads. The large readback signal and the pulse width measured at 50% amplitude (PW50) for the in-contact recording, compared with flying heads, was demonstrated.

IT 197852-64-5

RL: TEM (Technical or engineered material use); USES (Uses)
(MPBT; head-disk interface design for in-contact recording using wet systems)

RN 197852-64-5 HCPLUS

CN Poly(1,1-dimethyl-1,2-ethanediyl), .alpha.-[2-methyl-3-(tetrahydro-2,5-dioxo-3-furanyl)-1-propenyl]-.omega.-hydro- (9CI) (CA INDEX NAME)



L16 ANSWER 3 OF 5 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:649525 HCPLUS

DOCUMENT NUMBER: 127:340872

TITLE: Head-disk interface design for in-contact recording using wet systems

AUTHOR(S): Sato, Akinobu; Ajiki, Ken; Yangisawa; Tsukamoto, Yuji
CORPORATE SOURCE: FUnctional Devices Res. Labs., NEC Corp., Kawasaki, 216, Japan

SOURCE: IEEE Transactions on Magnetics (1997), 33(5, Pt. 1), 3163-3165

CODEN: IEMGAQ; ISSN: 0018-9464

PUBLISHER: Institute of Electrical and Electronics Engineers

DOCUMENT TYPE: Journal

LANGUAGE: English

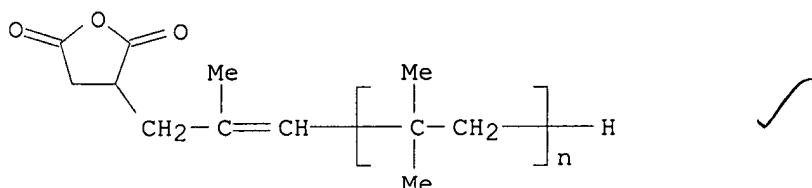
AB The authors have studied head-disk interface design concept of the wet systems is to realize a low bouncing height of sliders by using the meniscus attractive force of the lubricant between slider and disk. The lubricant offered high wear performance at the same time. Lubricants with high surface energies suppressed the bouncing height of contact sliders. A bouncing height of 3 nm was achieved for a combination of 30% contact sliders and lubricants of maleic anhydride modified polybutene. A contact slider design, with a meniscus-controlled contact pad, is proposed for contact sliders using wet systems. The bouncing of the slider was suppressed by regulating the etching depth of the meniscus-controlled contact pad. High wear performance of the in-contact recording system was confirmed by both the drag test for disks and the seek test for heads. The large readback signal and the pulse width measured at 50% amplitude (PW50) for the in-contact recording, compared with flying heads, was demonstrated.

IT 197852-64-5

RL: TEM (Technical or engineered material use); USES (Uses)
(MPBT; head-disk interface design for in-contact recording using wet systems)

RN 197852-64-5 HCPLUS

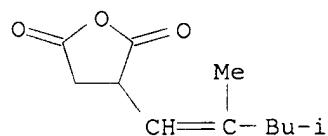
CN Poly(1,1-dimethyl-1,2-ethanediyl), .alpha.-[2-methyl-3-(tetrahydro-2,5-dioxo-3-furanyl)-1-propenyl]-.omega.-hydro- (9CI) (CA INDEX NAME)



L16 ANSWER 4 OF 5 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1996:720539 HCPLUS
 DOCUMENT NUMBER: 126:41636
 TITLE: Magneto-optical investigations on microstructural processes in magnetic fluids
 AUTHOR(S): Sofonea, Victor; Bica, Doina; Perzynski, Regine; Hasmonay, Eric; Bacri, Jean-Claude; Cabuil, Valerie
 CORPORATE SOURCE: Research Center Hydrodynamics, Cavitation and Magnetic Fluids Technical University Timisoara, Timisoara, R-1900, Rom.
 SOURCE: Romanian Reports in Physics (1995), 47(3-5), 307-317
 CODEN: RORPED; ISSN: 1221-1451
 PUBLISHER: Editura Academiei Romane
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Magneto-optical effects in magnetic fluids are powerful tools for the study of the microstructural processes induced in magnetic fluids under the action of magnetic fields. Exptl. results obtained from birefringence and dichroism measurements on 4 special samples prep'd. at the Tech. University of Timisoara are presented. Time-dependent structure formation is evidenced after several magnetization cycles and the influence of the prepn. method and of the surfactant layer are discussed.

IT 184713-45-9
 RL: PRP (Properties)
 (magneto-optical investigations on microstructural processes in magnetic fluids)
 RN 184713-45-9 HCPLUS
 CN 2,5-Furandione, 3-(2,4-dimethyl-1-pentenyl)dihydro-, homopolymer (9CI)
 (CA INDEX NAME)

CM 1

CRN 184713-44-8
CMF C11 H16 O3

L16 ANSWER 5 OF 5 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1982:123873 HCPLUS
 DOCUMENT NUMBER: 96:123873
 TITLE: Unsaturated polyester compositions
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56155219	A2	19811201	JP 1981-50846	19810403
JP 60008245	B4	19850301		

PRIORITY APPLN. INFO.: JP 1981-50846 19810403

AB Unsatd. polyester compns. curable with low shrinkage and good crack resistance contain an unsatd. polyester prep'd. using C8-12 alkenylsuccinic acid or anhydride in the acid monomer component and optionally ltoreq.100 phr C8-12 alkenyl succinic acid or anhydride as a crosslinking monomer. E.g., an unsatd. polyester [81139-72-2] (acid value 20) was prep'd. from diethylene glycol 116, adipic acid 74, and (diisobutetyl)succinic anhydride 105 g in the presence of 0.05 g hydroquinone, mixed with styrene to a 60% soln., mixed with 2.0% Bz2O2, cast, and cured at 120.degree. for 5 h to give a 2 mm specimen with tensile strength 0.9 kg/mm² and elongation 120%.

IT 81139-72-2P

RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of)

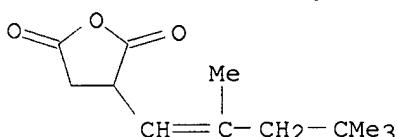
RN 81139-72-2 HCAPLUS

CN Hexanedioic acid, polymer with dihydro-3-(2,4,4-trimethyl-1-pentenyl)-2,5-furandione and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 72198-16-4

CMF C12 H18 O3



CM 2

CRN 124-04-9

CMF C6 H10 O4

HO₂C-(CH₂)₄-CO₂H

CM 3

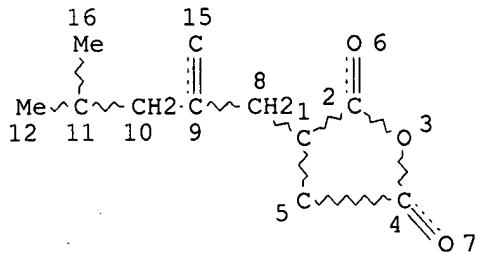
CRN 111-46-6

CMF C4 H10 O3

HO-CH₂-CH₂-O-CH₂-CH₂-OH

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L1 STR



NODE ATTRIBUTES:

CONNECT IS E1 RC AT 15

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L3 7 SEA FILE=REGISTRY SSS FUL L1

~~L4~~ 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L3

=>d gibbsabs chy test r11

L4 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1990:498183 HCAPLUS

DOCUMENT NUMBER: 113:98183

TITLE: Esters of .alpha.-sulfomaleic anhydride as powerful electrophiles for polyolefin functionalization

AUTHOR(S): Schaedeli, Ulrich; Padias, Anne Buyle; Brois, S. J.; Thaler, Warren A.; Hall, H. K., Jr.

CORPORATE SOURCE: Dep. Chem., Univ. Arizona, Tucson, AZ, 85721, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1990), 28(7), 1781-91

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

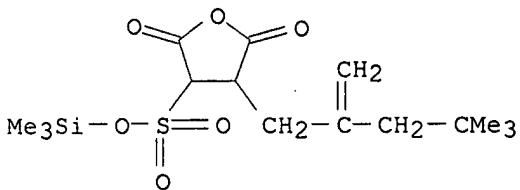
AB Electrophilic derivs. of maleic anhydride were synthesized to test their reactivity in ene reactions with the terminal double bond of hydrocarbon polymers. The sulfo Me and Et esters of sulfomaleic anhydride (I) were reacted with 2,2,4-trimethyl-1-pentene (II), a model compd. for the end group of the hydrocarbon polymers. The esters were more oleophilic than I itself, but many side reactions occurred. Trimethylsilyl and tert-butyldiphenylsilyl esters were also synthesized and reacted with II, and the ene reactions proceeded well in bulk, but the ene adducts decompd. upon heating. The powerful dienophilic character of these esters was demonstrated by a series of [4 + 2] cycloaddns.

IT 128940-33-0P 128940-34-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

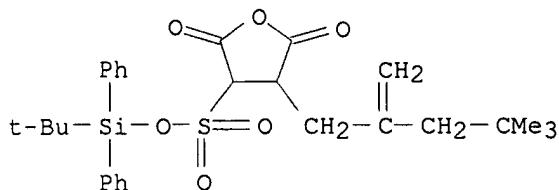
RN 128940-33-0 HCAPLUS

CN 3-Furansulfonic acid, 4-(4,4-dimethyl-2-methylenepentyl)tetrahydro-2,5-dioxo-, trimethylsilyl ester (9CI) (CA INDEX NAME)



RN 128940-34-1 HCAPLUS

CN 3-Furansulfonic acid, 4-(4,4-dimethyl-2-methylenepentyl)tetrahydro-2,5-dioxo-, (1,1-dimethylethyl)diphenylsilyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1988:631662 HCAPLUS

DOCUMENT NUMBER: 109:231662

TITLE: Study of the synthesis of poly(isobutylene-*b*-amide-11) by polycondensation of .alpha.,.omega.-dianhydride oligoisobutylene with .alpha.,.omega.-diamino oligoamide-11. I. Study of amine-anhydride and amide-anhydride reactions on low-molecular-weight models and on oligomers and polymers

AUTHOR(S): Tessier, Martine; Marechal, Ernest

CORPORATE SOURCE: Lab. Synth. Macromol., CNRS, Paris, 75005, Fr.

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1988), 26(10), 2785-810

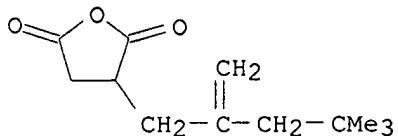
CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

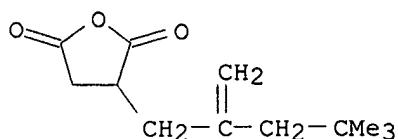
AB The side reactions connected with the polycondensation of .alpha.,.omega.-diaminooligoamides and .alpha.,.omega.-dianhydride oligoisobutylenes are studied on low- and high-mol.-wt. models. Models for amine and anhydride end groups are dodecylamine and (2-dodecen-1-yl)succinic anhydride (I), resp.; their reaction is studied in bulk and in soln. and the products are analyzed by ¹H-, ¹³C-, and ¹H-¹³C-NMR and GPC. Some of these products and the junctions between the blocks are prep'd. independently. Models of amide groups in the chain are N-dodecyldodecanamide and N-dodecyloctadecanamide; their reaction with I results in cleavage with formation of imide groups. They show unambiguously that crosslinking which accompanies the block polycondensation originates from the reaction of amino end groups with the intermediary acid groups resulting from the amine-anhydride reaction.

IT 72242-65-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, as model for isobutylene-nylon-11 block copolymer)
 RN 72242-65-0 HCPLUS
 CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA
 INDEX NAME)



L4 ANSWER 3 OF 11 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1984:121733 HCPLUS
 DOCUMENT NUMBER: 100:121733
 TITLE: Synthesis of mono- and difunctional oligoisobutylenes
 - IV. Modification of .alpha.,.omega.-dichlorooligoisobutylene by reaction with maleic anhydride. Preliminary study on block polycondensation
 AUTHOR(S): Tessier, M.; Marechal, E.
 CORPORATE SOURCE: Lab. Synth. Macromol., Paris, 75005, Fr.
 SOURCE: European Polymer Journal (1984), 20(3), 281-90
 CODEN: EUPJAG; ISSN: 0014-3057
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Thermal dehydrochlorination of .alpha.,.omega.-dichlorooligoisobutylene, prep'd. by initiation with 1,4-(ClCMe₂)₂C₆H₄ (T., M., and Nguyen, A. H., 1981), led to the formation of both endo and exo double bonds; endo double bonds were mainly those of 2,4-dimethyl-2-penten-4-ylphenyl end group and exo double bonds belonged to either short end-groups (2,4-dimethyl-1-penten-4-ylphenyl) or long ones (2,4-dimethyl-1-penten-4-yloligoisobutylene). Reaction of the dichlorinated oligomers with maleic anhydride (I) gave a mixt. of oligomers with anhydride, substituted propenyl, or indanic terminations. Pure .alpha.,.omega.-bis(2-methyl-2-propenyl)oligoisobutylene was prep'd. by basic dehydrochlorination of .alpha.,.omega.-dichlorinated oligomer; only exo double bonds were formed. This .alpha.,.omega.-unsatd. oligomer reacted with I to give an oligomeric mixt. with functionality, with respect to I, of 1.25 that contained endo double bonds and indan rings. When a catalyst (dichloromaleic anhydride [1122-17-4]) was added, 2 mols. of I could react with the same end of the chain. Various polyamides were prep'd. from the .alpha.,.omega.-dianhydride oligomers.

IT 72242-65-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with propylamine)
 RN 72242-65-0 HCPLUS
 CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA
 INDEX NAME)



L4 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:142704 HCAPLUS

DOCUMENT NUMBER: 96:142704

TITLE: Alkylacetonecarboxylic acids and their salts useful as corrosion protection agents

INVENTOR(S): Hoenl, Hans; Trieselt, Wolfgang

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 16 pp

CODEN: GWXXBX

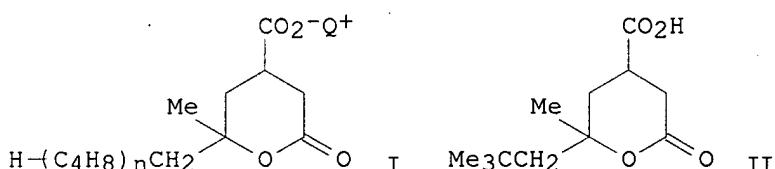
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3102353	A1	19820114	DE 1981-3102353	19810124
PRIORITY APPLN. INFO.:			DE 1980-3005494	19800214
GI				



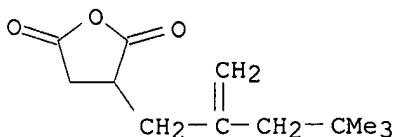
AB I (C4H8 = butadiene-free olefin cut, contg. .gtoreq.30% isobutene, n = 1-5, Q = H, alkali, alk. earth, or substituted ammonium) were prepd. as corrosion inhibitors. Thus, 500 parts disobutetylsuccinic anhydride and 500 vol. parts H2O were autoclaved 2 h at 185.degree. to give 77% II, the diethanolamine and triethanolamine salts of which were also prepd. (in soln.). These were better corrosion inhibitors than the corresponding succinic acid analogs.

IT 72242-65-0

RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis-rearrangement of)

RN 72242-65-0 HCAPLUS

CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA
INDEX NAME)



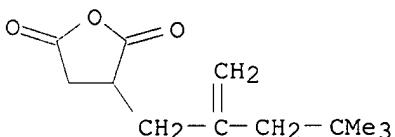
L4 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1982:53987 HCAPLUS
 DOCUMENT NUMBER: 96:53987
 TITLE: Photosetting resin composition
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56135504	A2	19811023	JP 1980-40041	19800327
JP 63034881	B4	19880712		

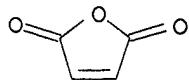
PRIORITY APPN. INFO.: JP 1980-40041 19800327
 AB The title compn. comprises 20-80 parts unsatd. polyester (prep'd. from .alpha.,.beta.-unsatd. dicarboxylic acids, alkenylsuccinic acids or their anhydrides, and polyols) and 20-80 parts (meth)acrylic monomer and affords the products having improved flexibility and vol. shrinkage. E.g., a blend of maleic anhydride 196, phthalic anhydride 148, diisobutenylsuccinic anhydride 420, ethylene glycol 155, propylene glycol 228, and hydroquinone 0.17 part reacted in N at 150.degree. for 2 h to obtain acid no. 110. The polyester [80512-36-3] 50 parts was dild. with 50 parts neopentyl glycol diacrylate [2223-82-7] contg. 3 parts benzophenone [119-61-9] and 0.01 parts hydroquinone, coated onto a plate, and cured with UV light to give a film with DuPont impact >50 cm.

IT 80512-36-3
 RL: USES (Uses)
 (acrylate-crosslinked, photocured coatings, impact-resistant)
 RN 80512-36-3 HCAPLUS
 CN 1,3-Isobenzofurandione, polymer with 3-(4,4-dimethyl-2-methylenepentyl)dihydro-2,5-furandione, 1,2-ethanediol, 2,5-furandione and 1,2-propanediol (9CI) (CA INDEX NAME)

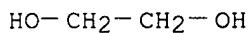
CM 1

CRN 72242-65-0
CMF C12 H18 O3

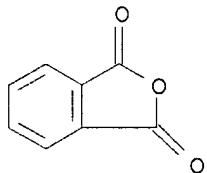
CM 2

CRN 108-31-6
CMF C4 H2 O3

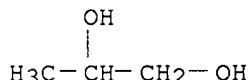
CM 3

CRN 107-21-1
CMF C2 H6 O2

CM 4

CRN 85-44-9
CMF C8 H4 O3

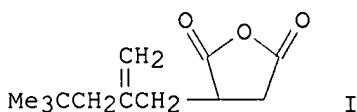
CM 5

CRN 57-55-6
CMF C3 H8 O2

L4 ANSWER 6 OF 11 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1982:6555 HCPLUS
 DOCUMENT NUMBER: 96:6555
 TITLE: Diisobutyrylsuccinic anhydride
 PATENT ASSIGNEE(S): Goi Kasei K. K., Japan
 SOURCE: Jpn. Kokai Tokyo Koho, 4 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 56115783	A2	19810911	JP 1980-20943	19800220
JP 59034189	B4	19840821		
PRIORITY APPLN. INFO.:			JP 1980-20943	19800220
GI				

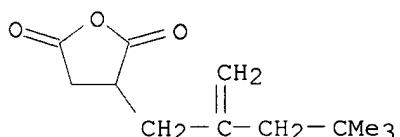


AB The title compd. (I) was prep'd. by reaction of Me₃CCH₂CMe:CH₂ (II) with maleic anhydride in the presence of p-RNH₂H₄CH₂C₆H₄NHR₁-p (III, R, R₁ = alkyl). Thus, autoclaving 224 g crude II (contg. 70.8% III) with 65.4 g maleic anhydride in the presence of 0.29 g III (R = R₁ = EtCHMe) at 200.degree. for 2 h gave 2.9 g I with 95.2% selectivity vs. 91.8% without the methylenedianiline.

IT 72242-65-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

RN 72242-65-0 HCPLUS

CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA INDEX NAME)



L4 ANSWER 7 OF 11 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1981:176053 HCPLUS
 DOCUMENT NUMBER: 94:176053
 TITLE: Unsaturated polyester casting compositions
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55155023	A2	19801203	JP 1979-63567	19790522

PRIORITY APPLN. INFO.:

JP 1979-63567 19790522

AB Polyesters derived from .alpha.,.beta.-unsatd. dicarboxylic acids and (or) alkenylsuccinic anhydride and glycols are cast and cured without much shrinkage. Thus, a mixt. of diethylene glycol 116, adipic acid 74, hydroquinone 0.05, and (4,4-dimethyl-2-methylenepentyl)succinic anhydride 105 g was heated 8 h at 200.degree. to give copolymer (I) [77222-05-0]. A compn. of I 60, styrene 40, and Bz2O2 2 parts was poured in a mold and heated 5 h at 120.degree. to give 2-mm sheets having tensile strength 0.9 kg/mm² and elongation 120%. When the above compn. was cast in a tin can and cured 5 h at 120.degree. the product had good adhesion to the can and no cracks.

IT 77222-05-0

RL: USES (Uses)

(casting compns., contg. styrene, with reduced shrinkage during curing)

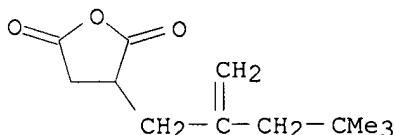
RN 77222-05-0 HCPLUS

CN Hexanedioic acid, polymer with 3-(4,4-dimethyl-2-methylenepentyl)dihydro-2,5-furandione and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 72242-65-0

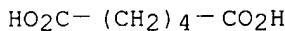
CMF C12 H18 O3



CM 2

CRN 124-04-9

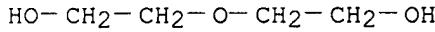
CMF C6 H10 O4



CM 3

CRN 111-46-6

CMF C4 H10 O3



L4 ANSWER 8 OF 11 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:47122 HCPLUS

DOCUMENT NUMBER: 94:47122

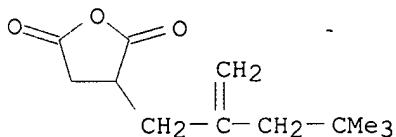
TITLE: Diisobutenylysuccinic anhydride

PATENT ASSIGNEE(S): Itsui Kasei K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55100374	A2	19800731	JP 1979-6667	19790123
JP 59019547	B4	19840507		

PRIORITY APPLN. INFO.: JP 1979-6667 19790123
 AB Diisobutylene mixt. (I; 2.00 mol, contg. Me₃CCH₂CHMe:CH₂ 70.8, Me₃CCH:CM₂ 25.4, Me₃CCH₂CH₂CH:CH₂ 0.6, MeCH₂CHMeC_{Et}:CH₂ 0.4, Me₂CHCH₂CM₂:CHMe 1.5, and Me₂CHCH:CM₂Et 1.3 wt. %), 0.677 mol maleic anhydride (II), and .alpha.-naphthol (0.44 wt. % of II) reacted 7 h with stirring at 200.degree., 200 g of the mixt. was distd. at 100-150.degree. (bath temp.) in vacuo to recover remaining I and II (105.0 and 2.0 g, resp.) and at 142-6.degree. under 3 mm Hg to give 87.0 g diisobutenylsuccinic anhydride (III) with 95.2% selectivity, compared with 76.8 and 80.8 g III with 89.2 and 92.0% selectivity by reaction with hydroquinone and phenothiazine, resp., in place of .alpha.-naphthol.
 IT 72242-65-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 72242-65-0 HCPLUS
 CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA INDEX NAME)



L4 ANSWER 9 OF 11 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1980:199309 HCPLUS
 DOCUMENT NUMBER: 92:199309
 TITLE: Unsaturated polyester molding compositions
 INVENTOR(S): Sekiguchi, Masatsugu; Ewami, Etsushi; Saito, Takayuki
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54163990	A2	19791227	JP 1978-73019	19780616
JP 56032325	B4	19810727		

PRIORITY APPLN. INFO.: JP 1978-73019 19780616
 AB Mixts. of 50-90 parts polyesters from dicarboxylic acids, glycols, and

alkenylsuccinic acid and 10-50 parts dialkyl alkenylsuccinate are molded to products with low mold shrinkage and good mech. strength. Thus, heating propylene glycol 11, (4,4-dimethyl-2-methylenepentyl)succinic anhydride 5, and phthalic anhydride 5 mol with 0.01% p-benzoquinone gives a polyester (I) [73510-84-6] with acid no. 25. A mixt. of I 70, di-Me (4,4-dimethyl-2-methylenepentyl)succinate (II) [73528-43-5] 30, and Bz2O2 1 part was molded at 80.degree. to a plate with mold shrinkage 3.0%, flexural strength 12.5 kg/mm², tensile strength 7.2 kg/mm², elongation 8.7%, impact strength 7.4 ft-lb/in., and water resistance at 100.degree. >72h, compared with 5.9, 10.8, 5.3, 4.0, 5.0, and >72, resp., with styrene in place of II.

IT 73510-84-6

RL: USES (Uses)

(molding compns., contg. alkenylsuccinate esters, with low mold shrinkage)

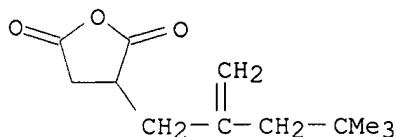
RN 73510-84-6 HCAPLUS

CN 1,3-Isobenzofurandione, polymer with 3-(4,4-dimethyl-2-methylenepentyl)dihydro-2,5-furandione and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

CRN 72242-65-0

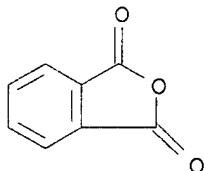
CMF C12 H18 O3



CM 2

CRN 85-44-9

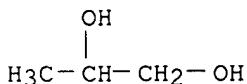
CMF C8 H4 O3



CM 3

CRN 57-55-6

CMF C3 H8 O2



L4 ANSWER 10 OF 11 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1980:24429 HCPLUS
 DOCUMENT NUMBER: 92:24429
 TITLE: High-solids alkyd coating compositions
 INVENTOR(S): Fujishima, Minoru; Owada, Masahiro; Saito, Takayuki
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54081340	A2	19790628	JP 1977-149686	19771213
JP 55012470	B4	19800402		

PRIORITY APPN. INFO.: JP 1977-149686 19771213
 AB High-solids alkyd coating compns. contained 79-81% alkyds (acid value <20, OH value 30-300) derived from (diisobut enyl)succinic anhydride (I) and had viscosity 4-100 P. For example, soybean oil fatty acid 500, I 254, and trimethylolpropane 300 parts were heated in the presence of a small amt. of xylene at 180.degree. for 1 h and then at 280.degree. to acid value 5.1 and OH value 112 and dild. with xylene to give an 80.6% solids alkyd (II). A compn. from II 100, Millionate MR 27.9, coal tar 50, and talc 50 parts gave a room temp.-cured coating (on tinplate and steel) with properties comparable or superior to those of a control (57.4%-solids) using Phthalkyd 806-65 in place of II.

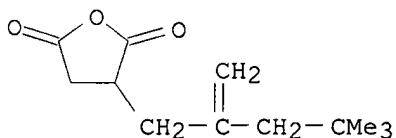
IT 72242-65-0D, polymers with polyols and fatty acids

72300-82-4

RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, high-solids)

RN 72242-65-0 HCPLUS

CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA INDEX NAME)



RN 72300-82-4 HCPLUS

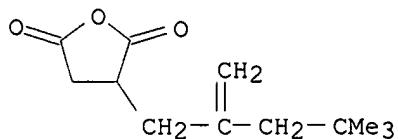
CN Benzoic acid, 4-(1,1-dimethylethyl)-, polymer with 3-(4,4-dimethyl-2-methylenepentyl)dihydro-2,5-furandione, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and oxybis[propanol] (9CI) (CA INDEX NAME)

CM 1

Wells 10/003,656

April 4, 2003

CRN 72242-65-0
CMF C12 H18 O3



CM 2

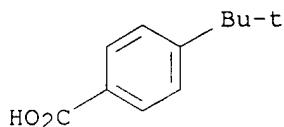
CRN 25265-71-8
CMF C6 H14 O3
CCI IDS

HO-CH₂-CH₂-O-CH₂-CH₂-OH

2 (D1-Me)

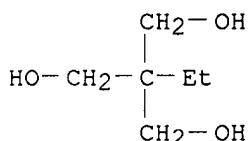
CM 3

CRN 98-73-7
CMF C11 H14 O2



CM 4

CRN 77-99-6
CMF C6 H14 O3

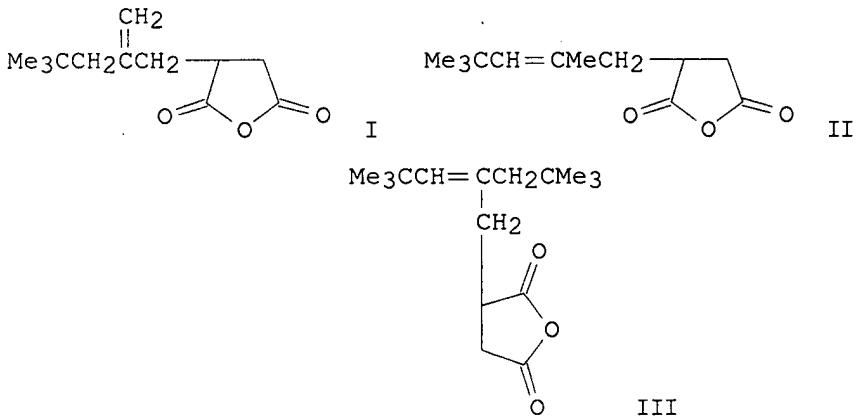


L4 ANSWER 11 OF 11 HCPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1980:23538 HCPLUS

DOCUMENT NUMBER: 92:23538
 TITLE: Epoxy resin curing compositions
 INVENTOR(S): Makino, Daisuke; Saito, Takayuki
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54087799	A2	19790712	JP 1977-156906	19771226
PRIORITY APPLN. INFO.:			JP 1977-156906	19771226

GI



AB Epoxy resins contg. crosslinkers I [72242-65-0], II [72242-66-1], and III [72242-67-2] had excellent pot life and gave elec. insulators with excellent thermal shock resistance. Thus, Epikote 828 (IV) [25068-38-6] contg. 110 phr I-II and 1 phr 2-ethyl-4-methylimidazole had viscosity (25.degree.) 11.3 and 18.4 P before and after 24 h storage, resp., compared with 19.4 and 35.7, resp., for a control contg. dodecenylsuccinic anhydride in place of I-III. When IV contg. I-II was cured 5 h at 120.degree., the cured resin had better thermal shock resistance than the control.

IT 72242-65-0

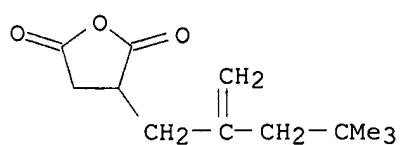
RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for epoxy resin elec. insulators)

RN 72242-65-0 HCPLUS

CN 2,5-Furandione, 3-(4,4-dimethyl-2-methylenepentyl)dihydro- (9CI) (CA INDEX NAME)

Wells 10/003, 656

April 4, 2003



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=> d que
L5          STR
           14
           O
  10      11    |||  12
  Me      C     C 13  O
  ^      |||  {   }
Me~C~~CH2-C~~CH2-C~~C~~C=O
1   2   3   4   5   6   7   8   9
```

NODE ATTRIBUTES:

CONNECT IS E3 RC AT 6
 CONNECT IS E2 RC AT 7
 CONNECT IS E1 RC AT 11
 CONNECT IS E1 RC AT 12
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

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L8 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L7

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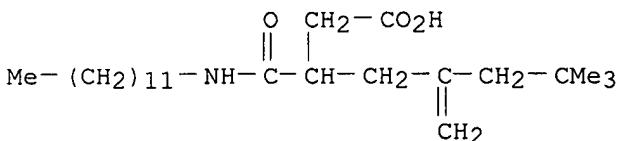
L8 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1988:631662 HCAPLUS
 DOCUMENT NUMBER: 109:231662
 TITLE: Study of the synthesis of poly(isobutylene-b-amide-11)
 by polycondensation of .alpha.,.omega.-dianhydride
 oligoisobutylene with .alpha.,.omega.-diamino
 oligoamide-11. I. Study of amine-anhydride and
 amide-anhydride reactions on low-molecular-weight
 models and on oligomers and polymers
 AUTHOR(S): Tessier, Martine; Marechal, Ernest
 CORPORATE SOURCE: Lab. Synth. Macromol., CNRS, Paris, 75005, Fr.
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry
 (1988), 26(10), 2785-810
 CODEN: JPACEC; ISSN: 0887-624X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The side reactions connected with the polycondensation of
 .alpha.,.omega.-diaminooligoamides and .alpha.,.omega.-dianhydride
 oligoisobutylenes are studied on low- and high-mol.-wt. models. Models
 for amine and anhydride end groups are dodecylamine and
 (2-dodecen-1-yl)succinic anhydride (I), resp.; their reaction is studied
 in bulk and in soln. and the products are analyzed by 1H-, 13C-, and
 1H-13C-NMR and GPC. Some of these products and the junctions between the
 blocks are prep'd. independently. Models of amide groups in the chain are
 N-dodecyldodecanamide and N-dodecyloctadecanamide; their reaction with I
 results in cleavage with formation of imide groups. They show

unambiguously that crosslinking which accompanies the block polycondensation originates from the reaction of amino end groups with the intermediary acid groups resulting from the amine-anhydride reaction.

IT 117648-66-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as model for isobutylene-nylon 11 block copolymer)

RN 117648-66-5 HCPLUS

CN Octanoic acid, 3-[(dodecylamino)carbonyl]-7,7-dimethyl-5-methylene- (9CI)
(CA INDEX NAME)

L8 ANSWER 2 OF 3 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1987:67838 HCPLUS

DOCUMENT NUMBER: 106:67838

TITLE: Carboxy-containing peroxides as polymerization initiators

INVENTOR(S): Sawada, Hideo

PATENT ASSIGNEE(S): Nippon Oils and Fats Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61192704	A2	19860827	JP 1985-33438	19850221
JP 06025208	B4	19940406		

PRIORITY APPLN. INFO.: JP 1985-33438 19850221

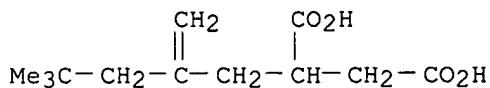
AB Title compds. HO₂CRC(O)OOCMe₂R₁ (R = C₆-18 alkenylene; R₁ = Me, Et, Pr) are sol. in org. solvents and are shock-insensitive and are useful as polymn. initiators in manuf. of carboxy-terminated vinyl polymers. Thus, a mixt. of 36.50 g tert-Bu hydroperoxide and 72.54 g octenylsuccinic anhydride in 446.28 g pentane was mixed dropwise with 10.70 g pyridine in 80 g pentane at 8-10.degree. in 3 min and reaction at 20.degree. for 1 h gave 96.82 g tert-butylperoxy .beta.-carboxyundecenoate (I) exhibiting 10-h half life temp. 98.degree. in PhMe, solv. in PhMe, benzene, and xylene 70-80%, and ballistic mortar test (JIS K4810) 1.008 (of TNT). A mixt. of 10.42 g styrene and 9.85 g I in 50 mL benzene was polymd. at 70.degree. to give a polymer with no.-av. mol. wt. 7720.

IT 5703-15-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with tert-Bu hydroperoxide, in prepn. of carboxy-contg.
peroxides as)

RN 5703-15-1 HCPLUS

CN Butanedioic acid, (4,4-dimethyl-2-methylenepentyl)- (9CI) (CA INDEX NAME)



L8 ANSWER 3 OF 3 HCPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1980:199311 HCPLUS
 DOCUMENT NUMBER: 92:199311
 TITLE: Polyester electric insulators
 INVENTOR(S): Omori, Eiji; Kikuchi, Masao; Makino, Daisuke; Aimon, Yuji
 PATENT ASSIGNEE(S): Hitachi Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54159491	A2	19791217	JP 1978-68435	19780607
JP 55027086	B4	19800718		

PRIORITY APPN. INFO.: JP 1978-68435 19780607
 AB Compns. of unsatd. polyesters, reaction products of (4,4-dimethyl-2-methylenepentyl)succinic anhydride with hydroxyalkyl or glycidyl methacrylates, and radical initiators are useful as castable elec. insulators with good adhesion to metals. Thus, a mixt. of 1:1:2 maleic anhydride-phthalic anhydride-propylene glycol copolymer [25037-66-5] 210, mono[2-(methacryloyloxy)ethyl] (4,4-dimethyl-2-methylenepentyl)succinate [73510-03-9] 90, Co octanoate 0.3, and MEK peroxide 3 g is heated 1 h at 80.degree. to give a product with good adhesion to metal and heat-shock resistance (30 min at -10.degree., 15 min at room temp, and 30 min at 150.degree.) 4 cycles.

IT 73510-03-9

RL: MOA (Modifier or additive use); USES (Uses)
 (crosslinking agents, for unsatd. polyester elec. insulators)

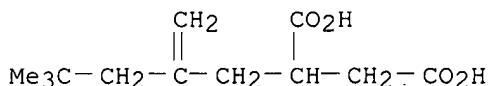
RN 73510-03-9 HCPLUS

CN Butanedioic acid, (4,4-dimethyl-2-methylenepentyl)-, mono[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5703-15-1

CMF C12 H20 O4



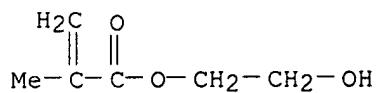
CM 2

CRN 868-77-9

Wells 10/003,656

April 4, 2003

CMF C6 H10 O3



S#

WES

USPT,PGPB,JPAB,EPAB,DWPI

(alkenylsuccinic anhydride) and (cosmetic or skin)

2003-04-03

13:35:00

S4874

U

USPT,PGPB,JPAB,EPAB,DWPI

alkenylsuccinic anhydride

2003-04-03

13:34:47

S4873

U

USPT,PGPB,JPAB,EPAB,DWPI

((polyisobutene)succinic anhydride or polyisobutene)succinic

anhydride)

same (glycerol or triethanolamine or diethylethanolamine or

methyl

triglycol or polyethylene glycol 200 or peg 200)) and (cosmetic

or skin)

2003-04-03

13:32:37

S4872

U

USPT,PGPB,JPAB,EPAB,DWPI

((polyisobutene)succinic anhydride or polyisobutene)succinic

anhydride)

same (glycerol or triethanolamine or diethylethanolamine or

methyl

triglycol or polyethylene glycol 200 or peg 200)